

### REMARKS

Claims 10-23 are all the claims pending in the application. By this Amendment, Applicant editorially amends claims 10, 14-16, 21, and 23 to further clarify the invention.

#### I. Preliminary Matter

As a preliminary matter, Applicant thanks the Examiner for returning the initialed form PTO/SB/08 submitted with the Information Disclosure Statement filed on February 1, 2008.

#### II. Summary of the Office Action

The Examiner objected to claims 21 and 23 for minor informalities. The Examiner also rejected claims 10-23 under 35 U.S.C. § 112, second paragraph, for minor informalities. The Examiner maintained prior art rejections with respect to claims 10-12 and 14-18. Specifically, claims 10-12, 14-18, and previously added claims 20 and 22 are rejected under 35 U.S.C. § 103(a) and claims 13 and 19 contain allowable subject matter. Based on page 6 of the Final Office Action, it appears that previously added claims 21 and 23 are also rejected under 35 U.S.C. § 103(a).

#### III. Objection to the Claims

The Examiner objected to claims 21 and 23 because of a minor informality. Applicant has revised the claims, and respectfully submits that the claims as now presented no longer include the potential informality mentioned by the Examiner. Applicant therefore respectfully requests the Examiner to withdraw the objections to the claims.

IV. Claim Rejections under 35 U.S.C. § 112, second paragraph

The Examiner rejected claims 10-23 under 35 U.S.C. § 112, second paragraph, for alleged minor informalities. Applicant respectfully traverses these grounds of rejection at least in view of the following exemplary comments.

With respect to claims 10, 13-16, and 19, the Examiner alleges that there are insufficient antecedent basis for the feature of “the machining unit names specified on the machining shape tree” (*see* page 2 of the Office Action). Applicant respectfully disagrees.

Applicant respectfully notes that claim 10, lines 5 through 8 recite: “a machining shape tree on which a plurality of machining unit names...is displayed hierarchically according to a machining order.” Accordingly, Applicant respectfully submits that proper antecedent basis for the machining unit names specified on the machining shape tree is provided in claim 10.

Similarly, Applicant respectfully notes that claim 13, lines 4 through 5 recite: “a machining shape tree on which a plurality of machining unit names is displayed hierarchically according to a machining order,” that claims 14 and 15, lines 5 through 6 recite: “a machining shape tree on which a plurality of machining unit names is displayed hierarchically according to a machining order,” and that claim 16, lines 2 through 5 recites “a machining shape tree on which a plurality of machining unit names... is displayed hierarchically according to a machining order.” Accordingly, Applicant respectfully submits that proper antecedent basis for the machining unit names specified on the machining shape tree is provided in claims 13-16.

Also, claim 19, lines 2 through 5 recites “a machining shape tree on which a plurality of machining unit names is displayed hierarchically according to a machining order.” Accordingly, Applicant respectfully submits that proper antecedent basis for the machining unit names specified on the machining shape tree is provided in claim 19.

In view of the above, Applicant respectfully requests the Examiner to withdraw this rejection of claims 10, 13-16, and 19.

The Examiner further alleges that there is insufficient antecedent basis for “the machining program names specified on the program tree” as set forth in claims 10, 13-16, and 19 (*see* pages 2-3 of the Office Action). Applicant respectfully disagrees. Applicant respectfully submits that claim 10, lines 9 to 10 recite: “a program tree on which a plurality of machining program names relating to the respective machining units is displayed hierarchically according to the machining order” providing antecedent basis for the above-noted feature of claim 10. Similarly, claims 13-16 and 19 recite analogous features providing proper antecedent basis for the above-noted unique features of claims 13-16 and 19 (*e.g.*, lines 5-7 of claim 13, lines 6-8 of claim 14, lines 6-8 of claim 15, lines 6-7 of claim 16, and lines 4-5 of claim 19).

In view of the above, Applicant respectfully requests the Examiner to withdraw this rejection of claims 10, 13-16, and 19.

With respect to claims 21 and 23, Applicant respectfully thanks the Examiner for pointing out, with particularity, the aspects of the claims thought to be indefinite. Applicant respectfully requests the Examiner to withdraw this rejection in view of the self-explanatory claim amendments being made herein.

#### V. Prior Art Rejection

Claims 10-12, 14-18, 20, and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,219,055 to Bhargava et al. (hereinafter “Bhargava”) in view of U.S. Patent No. 6,584,373 to Guenther et al. (hereinafter “Guenther”) and further in view of U.S. Patent Publication No. 2003/0195642 to Ragnini (hereinafter “Ragnini”). Applicant

respectfully requests the Examiner to withdraw these grounds of rejection at least in view of the following exemplary comments.

Independent claim 10 *inter alia* recites: “automatically inserting machining shape information corresponding to a specified shape element required for forming the machining unit data with respect to the machining shape model displayed in the model display section in a cursor position specified in the editor section, wherein the inserted machining shape information comprises shape of the machining unit that machines the work model into the product model and machining program executable by the machining unit.”

For example, a machining shape tree, a program tree, an editor section, and a model display section are provided as a displayed user interface. In an exemplary embodiment of the present invention, a shape element is selected in a 3-D display section (a model display section). In response to this selection, the machining shape information corresponding to the selected shape element in the model display section is automatically inserted in the editing display section. The insertion is provided at a cursor position in the editing display section. In other words, in an exemplary, non-limiting embodiment of the present invention, when a shape element is selected in the model display section, machining shape information which includes executable machining program, is automatically added to the editing display section *e.g.*, 48-51. The above provided description of an exemplary embodiment is provided only to help the Examiner further understand the unique features of claim 10 and is not provided to limit the scope of the claims in any way.

In response to Applicant’s arguments that the prior art of record does not disclose or suggest inserting of the machining shape information, as set forth in the independent claim 10, the Examiner contends that machining shape information can include adding a letter or a number

as shown in Fig. 10 of Bhargava or adding a radius of the Rear Cut as shown in Fig. 12 of Bhargava (*see* pages 11-12 of the Office Action).

Applicant respectfully submits, however, that Bhargava simply discloses a forming tool for manipulating a computer model including mechanisms for allowing a user to define a forming tool for creating a form feature of the model. Specifically, Bhargava discloses a window 96 being provided in response to the user selecting the Properties option of the pop-up menu 80 shown in FIG. 6. The properties shown in the window 96 are properties of the Rear Cut feature. Just as with the window 84 of FIG. 8, the user can modify items in the window 96 using the mouse 34 and/or the keyboard 33 (Figs. 6, 8, 10, and 12; col. 9, lines 44 to 55).

Bhargava, however, fails to disclose or suggest automatically inserting machining shape information. In Bhargava, the user types in the name as shown in Fig. 10 and the user sets the radius as shown in Fig. 12. In other words, Bhargava does not disclose or even remotely suggest a user selecting an element in one portion of the display and having additional information related to the selected element automatically being inserted in another portion of the display.

Furthermore, Bhargava does not disclose or suggest inserting machining shape information that includes machining program executable by the machining unit. In Bhargava, only the name or radius of the unit can be modified (Figs. 10 and 12). In Bhargava, there is no disclosure or suggest that machining program executable by the selected machining unit is automatically added.

In short, Bhargava does not disclose or suggest automatically inserting as opposed to the user inputting data and inserting the machine shape information that includes executable machining program as opposed to just changing the name or radius of the shape element. Guenther and Ragnini do not cure the above-identified deficiencies of Bhargava. Together, the

combined teachings of these references would not have and could have led an artisan of ordinary skill in the art to achieve the unique features of claim 10.

In addition, the Examiner asserts that “graphical browser portion 64” in Bhargava reference corresponds to “machining shape tree” as set forth in claim 10 (*see* page 4 of the Office Action). Applicant respectfully disagrees.

Bhargava does not disclose or suggest a machining shape tree which is a tree for indicating the name of the shape of the machining unit where this machining unit is defined as “a unit of machining in which continuous machining is performed with the same main spindle and with the same tool. In Bhargava, the feature list 68 displayed within the graphical browser portion 64 (alleged machining shape tree) is defined as “aspects and components of the model 66” (col. 7, lines 21-23). Thus, each element in the feature list 68 in Bhargava never corresponds to the machining unit as set forth in claim 10.

Also, the Examiner asserts that the “window 96” in Bhargava reference corresponds to the “editor section” as set forth in claim 10 (*see* page 4 of the Office Action). Applicant respectfully disagrees.

Bhargava fails to disclose or suggest an editor section that is include in the program editing screen. In Bhargava, the window 96 (alleged editor section) is displayed when a user selects the “pop-up menu” (Fig. 10; col. 9, lines 44-46). Thus, the window 96 of Bhargava does not correspond to the editor screen set forth in claim 10.

For at least these exemplary reasons, claim 10 is patentable over the prior art of record. Accordingly, Applicant respectfully requests the Examiner to withdraw this rejection of claim 10. Claims 11, 12, 20, and 21 are patentable at least by virtue of their dependency on claim 10.

In addition, claim 21 recites: “wherein inserting of the machining shape information comprises automatically inserting a name of the specified shape element and corresponding machine code for a corresponding machining unit in the editor section displayed at substantially same time with the machining shape tree where the specified shape element is selected.”

Applicant respectfully submits that the prior art of record does not disclose or suggest selecting a shape element in the displayed shape tree and having machine code for this element automatically inserted in another portion of the displayed user interface. For at least these additional exemplary reasons, claim 21 is patentable over the prior art of record.

Claim 14 recites: “displaying a machining unit corresponding to a cursor position in the editor section in an emphasized manner and displaying at substantially same time in the display section at least one of the product model and the work model in an emphasized manner indicating a connection of the displayed machining unit to the displayed at least one of the product model and the work model.”

In response to Applicant’s arguments, the Examiner contends that box around “Rear Cut” as shown in the tree 68 and feature properties window 96 discloses the above-noted unique features of claim 14 (*see* pages 12-13 of the Office Action). Applicant respectfully disagrees. Applicant respectfully notes that the Bhargava shows the selection of the “Rear Cut” in the browser portion 64 and not in the three-dimensional model portion 66. In other words, the selected “Rear Cut” in the tree shown in the browser portion 64 of Bhargava is correlated to the editing window 96. However, in Bhargava, the editing window 96 is not correlated to the three-dimensional model portion 66. That is, in Bhargava the working tool “Rear Cut” is correlated with the working tool “Rear Cut” in the tool list and not with the product model or work model. In short, Bhargava does not disclose or suggest correlating the work tool with the work model or

product model *e.g.*, by highlighting a portion in the three-dimensional model that will be worked on with the selected work tool.

For at least these exemplary reasons, claim 14 is patentable over the prior art of record. Accordingly, Applicant respectfully requests the Examiner to withdraw this rejection of claim 14.

Claims 15 and 16 recite features that are somewhat similar to, although not necessary coextensive with, the features set forth in claim 10 and argued above. For at least analogous reasons, therefore, claims 15 and 16 are patentable over Bhargava, Guenther, and Ragnini. Accordingly, Applicant respectfully requests the Examiner to withdraw this rejection of claims 15 and 16. Claims 17 and 18 are patentable at least by virtue of their dependency on claim 16 and claims 22 and 23 are patentable by virtue of their dependency on claim 15.

VI. Allowable Subject Matter

Applicant thanks the Examiner for indicating that claims 13 and 19 are allowable. Applicant does not acquiesce to the Examiner's reasons for allowance.


VII. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. **If any points remain in issue, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.**



The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

  
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Nataliya Dvorson  
Registration No. 56,616

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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